

# **MINOR SOURCE OPERATING PERMIT OFFICE OF AIR QUALITY**

**Square D Company  
252 N. Tippecanoe Street  
Peru, Indiana 46970**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 103-13816-00025	
Original signed by Paul Dubenetzky Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 1, 2002  Expiration Date: April 1, 2002

## TABLE OF CONTENTS

<b>A</b>	<b>SOURCE SUMMARY</b> .....	<b>4</b>
A.1	General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]	
A.2	Emissions Units and Pollution Control Equipment Summary	
<b>B</b>	<b>GENERAL CONDITIONS</b> .....	<b>6</b>
B.1	Permit No Defense [IC 13]	
B.2	Definitions	
B.3	Effective Date of the Permit [IC 13-15-5-3]	
B.4	Modification to Permit [326 IAC 2]	
B.5	Minor Source Operating Permit [326 IAC 2-6.1]	
B.6	Permit Term [326 IAC 2-6.1-7]	
B.7	Prior Permits Superseded	
<b>C</b>	<b>SOURCE OPERATION CONDITIONS</b> .....	<b>7</b>
	<b>Emission Limitations and Standards [326 IAC 2-6.1-5(1)]</b>	
C.1	PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]	
C.2	Hazardous Air Pollutants (HAPs) [326 IAC 2-7]	
C.3	Preventive Maintenance Plan [326 IAC 1-6-3]	
C.4	Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]	
C.5	Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]	
C.6	Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]	
C.7	Permit Revocation [326 IAC 2-1-9]	
C.8	Opacity [326 IAC 5-1]	
C.9	Fugitive Dust Emissions [326 IAC 6-4]	
	<b>Testing Requirements</b>	
C.10	Performance Testing [326 IAC 3-6] [326 IAC 2-1.1-11]	
C.11	Compliance Monitoring [326 IAC 2-1.1-11]	
	<b>Compliance Monitoring Requirements</b>	
C.12	Monitoring Methods [326 IAC 3]	
C.13	Compliance Response Plan - Failure to Take Response Steps [326 IAC 1-6]	
C.14	Actions Related to Noncompliance Demonstrated by a Stack Test	
	<b>Record Keeping and Reporting Requirements</b>	
C.15	Malfunctions Report [326 IAC 1-6-2]	
C.16	Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]	
C.17	General Record Keeping Requirements [326 IAC 2-6.1-2]	
C.18	General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]	
C.19	Annual Notification [326 IAC 2-6.1-5(a)(5)]	
<b>D.1</b>	<b>EMISSIONS UNIT OPERATION CONDITIONS: E-coat Paint System and Spray Booth (Q1)</b>	<b>16</b>
	<b>Emission Limitations and Standards [326 IAC 2-6.1-5(1)]</b>	
D.1.1	Volatile Organic Compounds (VOC) [326 IAC 8-2-9]	
D.1.2	Particulate Matter (PM) [326 IAC 6-3-2]	
D.1.3	Particulate Matter (PM) [326 IAC 6-2-4]	
D.1.4	Burning Regulations for Incinerators (PM) [326 IAC 4-2]	

**Record Keeping and Reporting Requirements**

D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

**Compliance Determination Requirements [326 IAC 2-1.1-11]**

D.1.6 Volatile Organic Compounds (VOC)

D.1.7 Particulate Matter (PM)

**Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

D.1.8 Monitoring

**Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

D.1.9 Record Keeping Requirements

D.1.10 Record Keeping [326 IAC 12] [40 CFR 60, Subpart A] [40 CFR 60.110b, Subpart Kb]

**D.2 EMISSIONS UNIT OPERATION CONDITIONS: Cutting and Welding Operations . . . . . 20**

**Emission Limitations and Standards [326 IAC 2-6.1-5(1)]**

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

**D.3 EMISSIONS UNIT OPERATION CONDITIONS: Boilers and Combustion Units . . . . . 21**

**Emission Limitations and Standards [326 IAC 2-6.1-5(1)]**

D.3.1 Particulate Matter (PM) [326 IAC 6-2-3]

**Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

D.3.2 Reporting Requirements

**Semi-Annual Natural Gas-Fired Boiler Certification . . . . . 23**

**Malfunction Report . . . . . 24**

**Annual Notification . . . . . 26**

## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1 and A.2 are descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary electrical circuit breaker panelboard manufacturing source.

Authorized Individual: Jack Bowers  
Source Address: 252 N. Tippecanoe Street, Peru, Indiana 46970  
Mailing Address: 252 N. Tippecanoe Street, Peru, Indiana 46970  
Phone Number: 765 - 472 - 3381  
SIC Code: 3613  
County Location: Miami  
County Status: Attainment for all criteria pollutants  
Source Status: Minor Source Operating Permit  
Minor Source, under PSD Rules;  
Minor Source, Section 112 of the Clean Air Act

### A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) One (1) electrocoat paint system, using a ten (10) stage phosphate pretreatment and an electro-deposition cathodic acrylic water-based paint, installed in 2001, consisting of:
  - (1) One (1) E-coat paint system dip tank with solvent recovery through ultrafiltration at paint bath and post rinse, exhausted through Stack S3, capacity: 1,080 metal parts for panelboard products per hour.
  - (2) Two (2) natural gas-fired boilers, identified as boiler #1 - paint line and alternate boiler #2 - paint line, rated at 5 million British thermal units per hour, each, exhausted through Stacks S8 and S8A, respectively.
  - (3) One (1) dehydration natural gas-fired oven, identified as paint dehydration burner, rated at 3 million British thermal units per hour, exhausted through Stack S7.
  - (4) One (1) natural gas-fired cure oven, identified as paint cure oven burner, rated at 4.5 million British thermal units per hour, exhausted through Stack S7.
  - (5) One (1) storage tank, identified as E-coat tank, capacity: 19,700 gallons of E-Coat paint.
  - (6) One (1) storage tank, identified as bulk resin, capacity: 7,578 gallons of paint resin.
  - (7) Two (2) back-up storage tanks, identified as paint storage, capacity: 10,689 gallons of E-Coat paint, each.

- (8) One (1) storage tank, identified as E-coat waste, capacity: 2,500 gallons of paint waste.
- (9) One (1) ten (10) stage cleaning and phosphating spray aqueous pretreatment operation, exhausting through Stacks S1 and S2.
- (10) One (1) post rinse - 5 stage operation, exhausting through Stack S4.
- (11) One (1) oven air seal & tunnel, exhausting through Stack S6.
- (12) One (1) incinerator used as a paint burn-off oven, rated at 0.625 million British thermal units per hour, exhausting through Stack R, capacity: 40 pounds of paint per hour.
- (b) One (1) powder spray booth, identified as Q1, using electrostatic air atomization and high volume, low pressure (HVLV) spray equipment, equipped with dry filters, exhausting to Stack Q, capacity: 13.5 units per hour.
- (c) One (1) natural gas-fired oven, identified as Powder Coat Oven, rated at 0.8 million British thermal units per hour.
- (d) One (1) metalworking operation, consisting of: MIG welding of panel boxes, capacity: 15 panel boxes per day, 8 feet of weld per box; five (5) laser cutting operations; and weld clean-up and buffing/polishing operation.
- (e) One (1) natural gas-fired boiler, identified as Boiler #1, installed in 1949, exhausting to Stack A, rated at 7.488 million British thermal units per hour.
- (f) One (1) natural gas-fired boiler, identified as Boiler #2, installed in 1949, exhausting to Stack B, rated at 7.592 million British thermal units per hour.
- (g) One (1) natural gas-fired boiler, identified as Boiler #3, installed in 1949, exhausting to Stack C, rated at 13 million British thermal units per hour.
- (h) Thirty (30) natural gas-fired heating units, each rated at less than 10.0 million British thermal units per hour, rated at 11.7 million British thermal units per hour, total.

## SECTION B

## GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

### B.1 Permit No Defense [IC 13]

This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

### B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

### B.4 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of operating permits pursuant to 326 IAC 2 (Permit Review Rules).

### B.5 Minor Source Operating Permit [326 IAC 2-6.1]

- (a) This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1.
- (b) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).
- (c) Pursuant to 326 IAC 2-6.1-7, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in this permit. If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

### B.6 Permit Term [326 IAC 2-6.1-7]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications or amendments of this permit do not affect the expiration date.

### B.7 Prior Permits Superseded

FESOP 103-5653-00025, issued December 11, 1996, and Significant Permit Revision 103-12337-00025, issued October 10, 2000, are superseded by this permit.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source
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### Emission Limitations and Standards [326 IAC 2-6.1-5(1)]

#### C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of PM, PM<sub>10</sub>, SO<sub>2</sub>, VOC, NO<sub>x</sub> or CO is less than two hundred fifty (250) tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit PM<sub>10</sub>, SO<sub>2</sub>, VOC, NO<sub>x</sub> or CO to 100 tons per year from this source, shall cause this source to be considered a major source under 326 IAC 2-7, and shall require approval from IDEM, OAQ prior to making the change.

#### C.2 Hazardous Air Pollutants (HAPS) [326 IAC 2-7]

Any change or modification which may increase potential to emit to ten (10) tons per year of any single hazardous air pollutant, twenty-five (25) tons per year of any combination of hazardous air pollutants from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM, OAQ prior to making the change.

#### C.3 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

#### C.4 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.5 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.6 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to 326 IAC 2-6.1-6(d)(3):

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by a notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.7 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.



- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

**C.8 Opacity [326 IAC 5-1]**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

**C.9 Fugitive Dust Emissions [326 IAC 6-4]**

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

**Testing Requirements**

**C.10 Performance Testing [326 IAC 3-6] [326 IAC 2-1.1-11]**

- (a) Compliance testing on new emissions units shall be conducted within sixty (60) days after achieving maximum production rate, but no later than one hundred eighty (180) days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAQ, within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the

initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

### **Compliance Monitoring Requirements**

#### **C.11 Compliance Monitoring [326 IAC 2-1.1-11]**

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

#### **C.12 Monitoring Methods [326 IAC 3]**

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

#### **C.13 Compliance Response Plan - Failure to Take Response Steps [326 IAC 1-6]**

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
  - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

- (4) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
  - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
  - (3) An automatic measurement was taken when the process was not operating.
  - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAQ shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAQ within thirty (30) days of receipt of the notice of deficiency. IDEM, OAQ reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

## Record Keeping and Reporting Requirements

### C.15 Malfunctions Report [326 IAC 1-6-2]

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Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a) (1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

### C.16 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

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- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.17 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;
  - (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
  - (1) Copies of all reports required by this permit;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Response Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.18 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) The reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
  - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
  - (2) A malfunction as described in 326 IAC 1-6-2; or
  - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
  - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.
- (e) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (f) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.19 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Branch, Office of Air Quality  
Indiana Department of Environmental Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

**SECTION D.1**

**EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

- (a) One (1) electrocoat paint system, using a ten (10) stage phosphate pretreatment and an electro-deposition cathodic acrylic water-based paint, installed in 2001, consisting of:
- (1) One (1) E-coat paint system dip tank with solvent recovery through ultrafiltration at paint bath and post rinse, exhausted through Stack S3, capacity: 1,080 metal parts for panelboard products per hour.
  - (2) Two (2) natural gas-fired boilers, identified as boiler #1 - paint line and alternate boiler #2 - paint line, rated at 5 million British thermal units per hour, each, exhausted through Stacks S8 and S8A, respectively.
  - (3) One (1) dehydration natural gas-fired oven, identified as paint dehydration burner, rated at 3 million British thermal units per hour, exhausted through Stack S7.
  - (4) One (1) natural gas-fired cure oven, identified as paint cure oven burner, rated at 4.5 million British thermal units per hour, exhausted through Stack S7.
  - (5) One (1) storage tank, identified as E-coat tank, capacity: 19,700 gallons of E-Coat paint.
  - (6) One (1) storage tank, identified as bulk resin, capacity: 7,578 gallons of paint resin.
  - (7) Two (2) back-up storage tanks, identified as paint storage, capacity: 10,689 gallons of E-Coat paint, each.
  - (8) One (1) storage tank, identified as E-coat waste, capacity: 2,500 gallons of paint waste.
  - (9) One (1) ten (10) stage cleaning and phosphating spray aqueous pretreatment operation, exhausting through Stacks S1 and S2.
  - (10) One (1) post rinse - 5 stage operation, exhausting through Stack S4.
  - (11) One (1) oven air seal & tunnel, exhausting through Stack S6.
  - (12) One (1) incinerator used as a paint burn-off oven, rated at 0.625 million British thermal units per hour, exhausting through Stack R, capacity: 40 pounds of paint per hour.
- (b) One (1) powder spray booth, identified as Q1, using electrostatic air atomization and high volume, low pressure (HVLP) spray equipment, equipped with dry filters, exhausting to Stack Q, capacity: 13.5 units per hour.
- (c) One (1) natural gas-fired oven, identified as Powder Coat Oven, rated at 0.8 million British thermal units per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)



## **Emission Limitations and Standards [326 IAC 2-6.1-5(1)]**

### **D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]**

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the one (1) E-coat paint system dip tank and the powder spray booth (Q1) shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried or extreme performance coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

### **D.1.2 Particulate Matter (PM) [326 IAC 6-3-2]**

The particulate matter (PM) from the one (1) powder spray booth (Q1) shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

### **D.1.3 Particulate Matter (PM) [326 IAC 6-2-4]**

Pursuant to 326 IAC 6-2-4, the PM emissions from two (2) natural gas-fired boilers, identified as boiler #1 - paint line and alternate boiler #2 - paint line, each rated at 5.0 million British thermal units per hour, shall not exceed 0.418 pounds per million British thermal units.

This limitation was computed using the following equation:

$$Pt = 1.09/Q^{0.26}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used. (Q = 40.08 million British thermal units per hour)

### **D.1.4 Burning Regulations for Incinerators (PM) [326 IAC 4-2]**

Pursuant to 326 IAC 4-2-2, the incinerator used as a paint burn-off oven shall not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air; and

### **D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]**

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for these emission units and any control devices.

### **Compliance Determination Requirements [326 IAC 2-1.1-11]**

#### **D.1.6 Volatile Organic Compounds (VOC)**

Compliance with the VOC content limitations contained in Conditions D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

#### **D.1.7 Particulate Matter (PM)**

In order to comply with Condition D.1.2, the dry filters for PM control shall be in operation at all times when the one (1) powder spray booth (Q1) is in operation.

### **Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

#### **D.1.8 Monitoring**

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the paint booth stack Q while the booth is in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

### **Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

#### **D.1.9 Record Keeping Requirements**

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records of the amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents. Records shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limit established in Condition D.1.1.
- (b) To document compliance with Conditions D.1.7 and D.1.8, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.10 Record Keeping [326 IAC 12] [40 CFR 60, Subpart A] [40 CFR 60.110b, Subpart Kb]

- (a) The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60 Subpart Kb.
- (b) The one (1) storage tank, identified as E-coat tank, with a capacity of 19,700 gallons of E-Coat paint, and the two (2) back-up storage tanks, identified as paint storage, each with a capacity of 10,689 gallons of E-Coat paint, shall comply with the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb). These tanks are subject only to 40 CFR Part 60.116b, paragraphs (a) and (b), which require the Permittee to maintain accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (d) One (1) metalworking operation, consisting of: MIG welding of panel boxes, capacity: 15 panel boxes per day, 8 feet of weld per box; five (5) laser cutting operations; and weld clean-up and buffing/polishing operation.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-6.1-5(1)]

#### D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

The particulate matter (PM) from the one (1) metalworking operation shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

### Compliance Determination Requirements [326 IAC 2-1.1-11]

There are no specific Compliance Determination Requirements applicable to these emission units.

### Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

There are no specific Compliance Monitoring Requirements applicable to these emission units.

## SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (e) One (1) natural gas-fired boiler, identified as Boiler #1, installed in 1949, exhausting to Stack A, rated at 7.488 million British thermal units per hour.
- (f) One (1) natural gas-fired boiler, identified as Boiler #2, installed in 1949, exhausting to Stack B, rated at 7.592 million British thermal units per hour.
- (g) One (1) natural gas-fired boiler, identified as Boiler #3, installed in 1949, exhausting to Stack C, rated at 13 million British thermal units per hour.
- (h) Thirty (30) natural gas-fired heating units, each rated at less than 10.0 million British thermal units per hour, rated at 11.7 million British thermal units per hour, total.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-6.1-5(1)]

#### D.3.1 Particulate Matter (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3, the PM emissions from the three (3) boilers, identified as Boiler #1, Boiler #2 and Boiler #3, are limited by the following equation:

$$Pt = C \times a \times h / 76.5 \times Q^{0.75} \times N^{0.25}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 MMBtu/hr heat input. The value 0.8 shall be used for Q greater than 1,000 MMBtu/hr heat input.

h = Stack height in feet.

Pursuant to 326 IAC 6-2-3(d), Pt for all facilities used for indirect heating purposes which were existing and in operation on or before June 8, 1972 shall not exceed 0.8 pounds of PM per million British thermal units. Therefore, the three (3) boilers, identified as Boiler #1, Boiler #2 and Boiler #3, are limited to emissions of 0.8 pounds of particulate matter per million British thermal units.

**Compliance Determination Requirements [326 IAC 2-1.1-11]**

There are no specific Compliance Determination Requirements applicable to these emission units.

**Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

There are no specific Compliance Monitoring Requirements applicable to these emission units.

**Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

**D.3.2 Reporting Requirements**

A semi-annual natural gas fired boiler certification for the one (1) natural gas-fired boiler, identified as Boiler #3, shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or their equivalent, within thirty (30) days after the end of the six (6) month period being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY**

**COMPLIANCE DATA SECTION**

**MINOR SOURCE OPERATING PERMIT  
SEMI-ANNUAL NATURAL GAS-FIRED BOILER CERTIFICATION**

Source Name: Square D Company  
Source Address: 252 N. Tippecanoe Street, Peru, Indiana 46970  
Mailing Address: 252 N. Tippecanoe Street, Peru, Indiana 46970  
Permit No.: MSOP 103-13816-00025

9	Natural Gas Only
9	Alternate Fuel burned
From: _____	To: _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
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Signature:
------------

Printed Name:
---------------

Title/Position:
-----------------

Phone:
--------

Date:
-------

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

**MALFUNCTION REPORT**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6  
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?\_\_\_\_\_, 25 TONS/YEAR SULFUR DIOXIDE ?\_\_\_\_\_, 25 TONS/YEAR NITROGEN OXIDES ?\_\_\_\_\_, 25 TONS/YEAR VOC ?\_\_\_\_\_, 25 TONS/YEAR HYDROGEN SULFIDE ?\_\_\_\_\_, 25 TONS/YEAR TOTAL REDUCED SULFUR ?\_\_\_\_\_, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?\_\_\_\_\_, 25 TONS/YEAR FLUORIDES ?\_\_\_\_\_, 100 TONS/YEAR CARBON MONOXIDE ?\_\_\_\_\_, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?\_\_\_\_\_, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?\_\_\_\_\_, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?\_\_\_\_\_, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?\_\_\_\_\_. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERMIT LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ?      Y      N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?      Y      N

COMPANY: \_\_\_\_\_ PHONE NO. : \_\_\_\_\_  
LOCATION: (CITY AND COUNTY) \_\_\_\_\_  
PERMIT NO. \_\_\_\_\_ AFS PLANT ID: \_\_\_\_\_ AFS POINT ID: \_\_\_\_\_ INSP: \_\_\_\_\_  
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/20\_\_\_\_ \_\_\_\_\_ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/20\_\_\_\_ \_\_\_\_\_ AM / PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO<sub>2</sub>, VOC, OTHER: \_\_\_\_\_

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_  
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_  
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_  
INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_



**Please note - This form should only be used to report malfunctions  
applicable to Rule 326 IAC 1-6 and to qualify for  
the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

**326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

\* **Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

<b>Company Name:</b>	<b>Square D Company</b>
<b>Address:</b>	<b>252 N. Tippecanoe Street</b>
<b>City:</b>	<b>Peru, Indiana 46970</b>
<b>Phone #:</b>	<b>765 - 472 - 3381</b>
<b>MSOP #:</b>	<b>103-13816-00025</b>

I hereby certify that Square D Company is  
☒ still in operation.  
☐ no longer in operation.

I hereby certify that Square D Company is  
☒ in compliance with the requirements of MSOP 103-13816-00025.  
☐ not in compliance with the requirements of MSOP 103-13816-00025.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>

## **Indiana Department of Environmental Management Office of Air Quality**

### **Technical Support Document (TSD) for a Minor Source Operating Permit**

#### **Source Background and Description**

<b>Source Name:</b>	<b>Square D Company</b>
<b>Source Location:</b>	<b>252 N. Tippecanoe Street, Peru, Indiana 46970</b>
<b>County:</b>	<b>Miami</b>
<b>SIC Code:</b>	<b>3613</b>
<b>Operation Permit No.:</b>	<b>MSOP 103-13816-00025</b>
<b>Permit Reviewer:</b>	<b>Edward A. Longenberger</b>

The Office of Air Quality (OAQ) has reviewed an application from Square D Company relating to the operation of an electrical circuit breaker panelboard manufacturing source.

#### **History**

Square D Company was issued a Federally Enforceable State Operating Permit (FESOP 103-5653-00025) on December 11, 1996. On June 1, 2000, Square D Company submitted an application to the OAQ requesting to add a metal finishing system (E-Coat paint line) to their existing plant. The approval to construct and operate the new E-coat paint line was granted through SPR 103-12337-00025, issued on October 10, 2000. As of April 2001, the new E-Coat paint line is constructed and operating, and the old E-Coat painting system has been removed from service. The removal of the original E-Coat painting system has caused the unrestricted potential to emit of VOC from the entire source to drop to 58.2 tons per year, which is less than the FESOP thresholds.

#### **Equipment Removed from Service**

The source has removed the following equipment since the issuance of FESOP 103-5653-00025:

One (1) E-Coat painting system, capacity: 13,440 square feet per hour, exhausting at five (5) stacks, identified as Stacks D, E, F, G and H.

#### **Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) electrocoat paint system, using a ten (10) stage phosphate pretreatment and an electro-deposition cathodic acrylic water-based paint, installed in 2001, consisting of:
  - (1) One (1) E-coat paint system dip tank with solvent recovery through ultrafiltration at paint bath and post rinse, exhausted through Stack S3, capacity: 1,080 metal parts for panelboard products per hour.

- (2) Two (2) natural gas-fired boilers, identified as boiler #1 - paint line and alternate boiler #2 - paint line, rated at 5 million British thermal units per hour, each, exhausted through Stacks S8 and S8A, respectively.
- (3) One (1) dehydration natural gas-fired oven, identified as paint dehydration burner, rated at 3 million British thermal units per hour, exhausted through Stack S7.
- (4) One (1) natural gas-fired cure oven, identified as paint cure oven burner, rated at 4.5 million British thermal units per hour, exhausted through Stack S7.
- (5) One (1) storage tank, identified as E-coat tank, capacity: 19,700 gallons of E-Coat paint.
- (6) One (1) storage tank, identified as bulk resin, capacity: 7,578 gallons of paint resin.
- (7) Two (2) back-up storage tanks, identified as paint storage, capacity: 10,689 gallons of E-Coat paint, each.
- (8) One (1) storage tank, identified as E-coat waste, capacity: 2,500 gallons of paint waste.
- (9) One (1) ten (10) stage cleaning and phosphating spray aqueous pretreatment operation, exhausting through Stacks S1 and S2.
- (10) One (1) post rinse - 5 stage operation, exhausting through Stack S4.
- (11) One (1) oven air seal & tunnel, exhausting through Stack S6.
- (12) One (1) incinerator used as a paint burn-off oven, rated at 0.625 million British thermal units per hour, exhausting through Stack R, capacity: 40 pounds of paint per hour.
- (b) One (1) powder spray booth, identified as Q1, using electrostatic air atomization and high volume, low pressure (HVLP) spray equipment, equipped with dry filters, exhausting to Stack Q, capacity: 13.5 units per hour. (previously classified under insignificant activities)
- (c) One (1) natural gas-fired oven, identified as Powder Coat Oven, rated at 0.8 million British thermal units per hour. (previously classified under insignificant activities)
- (d) One (1) metalworking operation, consisting of: MIG welding of panel boxes, capacity: 15 panel boxes per day, 8 feet of weld per box; five (5) laser cutting operations; and weld clean-up and buffing/polishing operation. (previously classified under insignificant activities)
- (e) One (1) natural gas-fired boiler, identified as Boiler #1, installed in 1949, exhausting to Stack A, rated at 7.488 million British thermal units per hour. (previously classified under insignificant activities)
- (f) One (1) natural gas-fired boiler, identified as Boiler #2, installed in 1949, exhausting to Stack B, rated at 7.592 million British thermal units per hour. (previously classified under insignificant activities)
- (g) One (1) natural gas-fired boiler, identified as Boiler #3, installed in 1949, exhausting to Stack C, rated at 13 million British thermal units per hour.

- (h) Thirty (30) natural gas-fired heating units, each rated at less than 10.0 million British thermal units per hour, rated at 11.7 million British thermal units per hour, total. (previously classified under insignificant activities)

### **Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

### **New Emission Units and Pollution Control Equipment**

There are no new facilities proposed at this source during this review process.

### **Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following:

- (a) FESOP 103-5653-00025, issued on December 11, 1996; and
- (b) SPR 103-12337-00025, issued on October 10, 2000.

All conditions from previous approvals were incorporated into this permit except the following:

- (a) FESOP 103-5653-00025, issued on December 11, 1996

Conditions D.2.1 and D.2.2: These conditions limited the VOC and HAPs emissions to less than FESOP thresholds.

Reason not incorporated: With the removal of the original E-coat painting system, the unrestricted potential to emit of VOC and HAPs from the entire source are below FESOP thresholds. Therefore, the emission limitations in Conditions D.2.1 and D.2.2 are no longer needed.

- (b) FESOP 103-5653-00025, issued on December 11, 1996

Conditions D.2.10(a) and D.2.12: These conditions contained the record keeping and reporting requirements which were associated with the FESOP limits in Conditions D.2.1 and D.2.2

Reason not incorporated: Since the emission limitations are no longer necessary, it follows that the associated record keeping and reporting requirements can also be removed.

- (c) FESOP 103-5653-00025, issued on December 11, 1996

Condition D.2.4: This condition contained a PM emission limit for the two (2) paint line boilers of 0.482 pounds per million British thermal units heat input, pursuant to 326 IAC 6-2-4.

Reason not incorporated: The PM emission limit of 0.482 is incorrect. Pursuant to 326 IAC 6-2-4, the PM emission limit for the two (2) paint line boilers is 0.418 pounds per million British thermal units heat input.

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on January 22, 2001, with additional information received on August 20, 2001.

### Emission Calculations

See pages 1 through 5 of 5 of Appendix A of this document for detailed emissions calculations.

The PM emissions from the metalworking area have been estimated to be 2.0 tons per year. We have conservatively assumed that all PM is PM<sub>10</sub>.

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	13.6
PM <sub>10</sub>	15.1
SO <sub>2</sub>	0.155
VOC	58.2
CO	21.6
NO <sub>x</sub>	25.7

HAPS	Potential To Emit (tons/year)
Glycol Ethers	1.16
Ethylene Glycol	0.066
Benzene	0.0005

HAPS	Potential To Emit (tons/year)
Dichlorobenzene	0.0003
Formaldehyde	0.019
Hexane	0.463
Toluene	0.0009
Lead Compounds	0.0001
Cadmium Compounds	0.0003
Chromium Compounds	0.0004
Manganese Compounds	0.0001
Nickel Compounds	0.0005
TOTAL	1.72

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of VOC and NO<sub>x</sub> are greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1.
- (b) Fugitive Emissions  
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

#### Actual Emissions

No previous emission data has been received from the source.

#### Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPS
E-coat Paint System including Combustion	0.151	0.603	0.048	54.6	6.67	7.94	1.38
Polyester Powder Paint (Q1)	6.63	6.63	-	-	-	-	-

	<b>Limited Potential to Emit</b> (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPS
Baking Enamel (Q1)	4.47	4.47	-	2.62	-	-	-
Powder Coat Oven	0.007	0.027	0.002	0.019	0.294	0.350	0.007
Boiler #1	0.062	0.249	0.020	0.180	2.75	3.28	0.062
Boiler #2	0.063	0.253	0.020	0.183	2.79	3.33	0.063
Boiler #3	0.108	0.433	0.034	0.313	4.78	5.69	0.107
Metalworking operation	2.00	2.00	-	-	-	-	-
Thirty (30) heating units	0.097	0.389	0.031	0.282	4.30	5.12	0.097
Total Emissions	13.6	15.1	0.155	58.2	21.6	25.7	1.72

#### County Attainment Status

The source is located in Miami County.

Pollutant	Status
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Miami County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Miami County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.



## Part 70 Permit Determination

### 326 IAC 2-7 (Part 70 Permit Program)

This existing source, based on the emissions summarized in this permit, MSOP 103-13816-00025, is no longer subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than one hundred (100) tons per year,
- (b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and
- (c) any combination of HAPS is less than twenty-five (25) tons/year.

## Federal Rule Applicability

- (a) The two (2) paint line natural gas-fired boilers, identified as boiler #1 - paint line, and alternate boiler #2 - paint line, each rated at 5 million British thermal units per hour, and the two (2) natural gas-fired boilers, identified as boiler #1 and boiler #2, are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), because each boiler is rated at less than ten (10) million British thermal units per hour.

The one (1) natural gas-fired boiler, identified as boiler #3, installed in 1949, is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), because the boiler was constructed before June 9, 1989, the applicability date of this rule.

- (b) The one (1) storage tank, identified as E-coat tank, with a capacity of 19,700 gallons of E-Coat paint, and the two (2) back-up storage tanks, identified as paint storage, each with a capacity of 10,689 gallons of E-Coat paint are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110, Subpart Kb) since each capacity is greater than forty (40) cubic meters (10,567 gallons) and were constructed after the July 23, 1984 applicability date. Since the tanks have a capacity less than seventy-five (75) cubic meters, the tanks are only subject to 40 CFR Part 60.116b, paragraphs (a) and (b), which require record keeping.
- (c) The one (1) storage tank, identified as bulk resin, with a capacity of 7,578 gallons of paint resin, and the one (1) storage tank, identified as E-coat waste, with a capacity of 2,500 gallons of paint waste, are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110, Subpart Kb), since their capacities are each less than forty (40) cubic meters.
- (d) The one (1) incinerator used as a paint burn-off oven is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart EEE, because the incinerator is a industrial furnace process which is exempt for this rule. The oven burns off paint from metal which is then reused in product manufacturing.

## State Rule Applicability - Entire Source

### 326 IAC 2-6 (Emission Reporting)

This source is located in Miami County, and the potential to emit CO, PM<sub>10</sub>, VOC, SO<sub>2</sub> and NO<sub>x</sub> is each less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### State Rule Applicability - Individual Facilities

#### 326 IAC 4-2 (Incinerators)

The one (1) incinerator used as a paint burn-off oven, rated at 0.625 million British thermal units per hour, exhausting through Stack R is subject to the requirements of 326 IAC 4-2-2. Pursuant to 326 IAC 4-2-2(8)(B), the allowable PM emission rate from incinerators with a burning capacity of less than 200 pounds per hour is 0.5 pounds per one thousand (1,000) pounds of dry exhaust at standard conditions corrected to fifty percent (50%) excess air.

#### 326 IAC 6-2-3 (Particulate Emissions Limitations for Facilities Constructed prior to September 21, 1983)

The three (3) boilers, identified as Boiler #1, Boiler #2 and Boiler #3, each constructed in 1949, with a total heat input capacity of 30.08 million British thermal units per hour, must comply with the PM emission limitation of 326 IAC 6-2-3. This limitation is based on the following equation given in 326 IAC 6-2-3:

$$Pt = C \times a \times h / 76.5 \times Q^{0.75} \times N^{0.25}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 MMBtu/hr heat input. The value 0.8 shall be used for Q greater than 1,000 MMBtu/hr heat input.

$h$  = Stack height in feet.

For the three (3) boilers:

$$Pt = 50 \times 0.67 \times 31.0 / 76.5 \times (30.08)^{0.75} \times 3^{0.25} = 0.803 \text{ lb/MMBtu}$$

Pursuant to 326 IAC 6-2-3(d),  $Pt$  for all facilities used for indirect heating purposes which were existing and in operation on or before June 8, 1972 shall not exceed 0.8 pounds per million British thermal units. Therefore, the three (3) boilers are limited to emissions of 0.8 pounds per million British thermal units.

Based on Appendix A, the total potential to emit of PM from the three (3) boilers is 0.250 tons per year.

$$0.250 \text{ tons/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 0.057 \text{ lbs/hr}$$
$$(0.057 \text{ lbs/hr} / 30.08 \text{ MMBtu/hr}) = 0.002 \text{ lbs PM per MMBtu}$$

Therefore, the three (3) boilers, identified as Boiler #1, Boiler #2 and Boiler #3, will comply with this rule.

#### 326 IAC 6-2-4 (Particulate Emissions Limitations for Facilities Constructed after September 21, 1983)

The two (2) natural gas-fired boilers, identified as boiler #1 - paint line and alternate boiler #2 - paint line, installed in 2001, with a total rating of 10.0 million British thermal units per hour, must comply with the requirements of 326 IAC 6-2-4. The emission limitations are based on the following equation is given in 326 IAC 6-2-4:

$$Pt = 1.09/Q^{0.26}$$

where:

$Pt$  = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

$Q$  = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

$$Pt = 1.09/Q^{0.26}$$

$$Pt = 1.09/(40.08)^{0.26} = 0.418 \text{ lb/MMBtu}$$

Based on Appendix A, the potential PM emission rate is:

$$0.083 \text{ ton/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 0.019 \text{ lb/hr}$$
$$(0.019 \text{ lb/hr} / 10.0 \text{ MMBtu/hr}) = 0.002 \text{ lb PM per MMBtu}$$

Therefore, the two (2) natural gas-fired boilers, identified as boiler #1 - paint line and alternate boiler #2 - paint line, will comply with this rule.

### 326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) emission rate from the powder spray booth Q1, and the metalworking operations shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The dry filters shall be in operation at all times the powder spray booth Q1 is in operation, in order to comply with this limit.

### 326 IAC 8-2-9 (Miscellaneous Metal Coating)

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings delivered to the applicators in the metal finishing system and the spray booth Q1 shall be limited to 3.5 pounds of VOCs per gallon of coating less water for air dried or extreme performance coatings.
- (b) Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the Cathodic E-Coat Paint Powercron, and the powder spray booth Q1 comply with this rule.

### Conclusion

The operation of this electrical circuit breaker panelboard manufacturing source shall be subject to the conditions of the attached proposed Minor Source Operating Permit **103-13816-00025**. This MSOP will supersede FESOP 103-5653-00025, issued December 11, 1996, and Significant Permit Revision 103-12337-00025, issued October 10, 2000.

Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations

Page 1 of 5 TSD App A

Company Name: Square D Company  
Address City IN Zip: 252 N. Tippecanoe Street, Peru, Indiana 46970  
MSOP: 103-13816  
Plt ID: 103-00025  
Reviewer: Edward A. Longenberger  
Date: January 22, 2001

Material	Density (lbs/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency
E-Coat Paint System																
Cathodic E-Coat Paint Powercron CR 925 - CP916	8.59	88.00%	85.0%	3.0%	87.6%	9.09%	0.04350	1080.000	2.08	0.26	12.11	290.70	53.05	0.00	2.84	100%
State Potential Emissions											Add worst case coating to all solvents		Before Recycling			
											Applicant Estimate After Solvent Recycling, Evaporation and Purges		12.11		290.70	
													53.05		0.00	
											3.540		84.960		15.505	
													0.00			

Metal

Material	Density (lbs/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency
10-Stage Cleaning & Phosphating Op.																
ChemKleen 611L	10.43	100.00%	97.5%	2.5%	97.5%	9.09%	1.01850	1.000	10.43	0.26	0.2654	6.37	1.16	0.00	2.87	100%
State Potential Emissions											Add worst case coating to all solvents		Uncontrolled			
													0.265		6.371	
													1.163		0.000	

Metal

Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) \* Weight % Organics) / (1-Volume % water)  
Pounds of VOC per Gallon Coating = (Density (lbs/gal) \* Weight % Organics)  
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \* (8760 hrs/yr) \* (1 ton/2000 lbs)  
Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)  
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emission Calculations**  
**HAP Emission Calculations**

Page 2 of 5 TSD AppA

**Company Name: Square D Company**  
**Address City IN Zip: 252 N. Tippecanoe Street, Peru, Indiana 46970**  
**MSOP: 103-13816**  
**Plt ID: 103-00025**  
**Reviewer: Edward A. Longenberger**  
**Date: January 22, 2001**

Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethylene Glycol	Weight % Glycol Ether	Weight %	Weight %	Weight %	Weight %	Weight %	Ethylene Glycol Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)	Emissions (tons/yr)	Emissions (tons/yr)	Emissions (tons/yr)	Emissions (tons/yr)	Emissions (tons/yr)
<b>E-Coat Paint System</b>																	
Cathodic E-Coat Paint Powercron CR 925 - CP916	8.59	0.04350	1080.000	0.003720%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.0658	0.00	0.00	0.00	0.00	0.00	0.00
<b>10-Stage Cleaning &amp; Phosphating OP</b>																	
ChemKleen 611L	10.43	1.01850	1.000	0.000000%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.0000	1.16	0.00	0.00	0.00	0.00	0.00
<b>METHODOLOGY</b>											<b>Individual Total Total HAPs</b>	<b>0.066 1.23</b>	<b>1.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Applicant Estimate After Solvent Recycling, Evaporation and Purges</b>											<b>Individual Total Total HAPs</b>	<b>0.019 1.18</b>	<b>1.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

HAPS emission rate (tons/yr) = Density (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations**

Page 3 of 5 TSD App A

**Company Name: Square D Company  
Address City IN Zip: 252 N. Tippecanoe Street, Peru, Indiana 46970  
MSOP: 103-13816  
Plt ID: 103-00025  
Reviewer: Edward A. Longenberger  
Date: January 22, 2001**

Material	Density (lbs/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency
<b>Powder Spray Booth Q1</b>																
Polyester Powder Paint	12.82	0.00%	0.0%	0.0%	0.0%	100.00%	0.03500	13.500	0.00	0.00	0.00	0.00	0.00	6.63	0.00	75%
Baking Enamel	10.20	12.83%	0.0%	12.8%	0.0%	82.10%	0.03400	13.500	1.31	1.31	0.60	14.38	2.62	4.47	1.59	75%

Powder Paint  
Baking Enamel

PM  
PM

Control Efficiency  
Control Efficiency

99.80%  
95.80%

**State Potential Emissions**

**Add worst case coating to all solvents**

**Uncontrolled  
Controlled**

**0.599  
0.599**

**14.4  
14.4**

**2.62  
2.62**

**11.1  
0.201**

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) \* Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lbs/gal) \* Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)

Total = Worst Coating + Sum of all solvents used

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
MM BTU/HR <100  
Small Industrial Boiler**

Page 4 of 5 TSD App A

**Company Name:** Square D Company  
**Address City IN Zip:** 252 N. Tippecanoe Street, Peru, Indiana 46970  
**MSOP:** 103-13816  
**Plt ID:** 103-00025  
**Reviewer:** Edward A. Longenberger  
**Date:** January 22, 2001

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Boiler #1	7.488	mmbtu/hr
		Boiler #2	7.592	mmbtu/hr
		Boiler #3	13.0	mmbtu/hr
		E-Coat Boilers #1 and #2	10.0	mmbtu/hr
		Dehydration Oven	3.0	mmbtu/hr
		Cure Oven	4.5	mmbtu/hr
		Incinerator	0.625	mmbtu/hr
		Powder Coat Oven	0.8	mmbtu/hr
		Heating units	11.7	mmbtu/hr
		<b>Total</b>	<b>58.71</b>	<b>mmbtu/hr</b>

Pollutant						
Emission Factor in lb/MMCF	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.489	1.95	0.154	25.7	1.414	21.6

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 5 for HAPs emissions calculations.



**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**Small Industrial Boiler**  
**HAPs Emissions**

**Page 5 of 5 TSD App A**

**Company Name: Square D Company**  
**Address City IN Zip: 252 N. Tippecanoe Street, Peru, Indiana 46970**  
**MSOP: 103-13816**  
**Plt ID: 103-00025**  
**Reviewer: Edward A. Longenberger**  
**Date: January 22, 2001**

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	5.400E-04	3.086E-04	1.929E-02	4.629E-01	8.743E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total HAPs
Potential Emission in tons/yr	1.286E-04	2.829E-04	3.600E-04	9.772E-05	5.400E-04	0.485

Methodology is the same as page 4.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.